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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/042,780	01/08/2002	Patrick Vandenameele-Lepla	020798-002100US	5185
27820	7590	05/05/2005	EXAMINER	
WITHROW & TERRANOVA, P.L.L.C.			WONG, LINDA	
P.O. BOX 1287			ART UNIT	
CARY, NC 27512			PAPER NUMBER	

2634
DATE MAILED: 05/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/042,780

Applicant(s)

VANDENAMEELE-LEPLA,
PATRICK

Examiner

Linda Wong

Art Unit

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7-30 is/are allowed.
- 6) ☒ Claim(s) 1 and 6 is/are rejected.
- 7) ☒ Claim(s) 2-5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:
 - a. On page 6, paragraph [0056], line 6, the application number for the cross-reference US Patent application No. is 09966419 and should be included in the sentence.

Appropriate correction is required.

Claim Objections

2. **Claim 17** is objected to because of the following informalities:
 - a. **Claim 17, line 6**, recites the limitation "first compensated signal". There is insufficient antecedent basis for this limitation in the claim. It is suggested the term "first compensated signal" be changed to "phase compensated signal".
 - b. **Claim 17, lines 10-14**, a phase metric is estimated using the phase-compensated signal the equalized signal the estimated channel transfer function and a plurality of carrier-specific weighting factors. The use of the term "and" between the terms "phase-compensated signal" and "equalized signal" causes a presumption of the phase metric calculation requiring only two inputs: phase-compensated signal and equalized signal. It is suggested the term "and" is replaced with ",". Also, the term "wherein" should be placed between the terms "factors," and "each" to clarify the carrier-specific weighting factors are associated with a plurality of carriers.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1, 6** are rejected under 35 U.S.C. 103(a) as being unpatentable over Peeters et al. (US Patent No.: 6628738) in view of Imamura (US Patent No.: 6862262).

a. **Claim 1**, Peeters et al. disclose a multi-carrier transmission system associating and assigning weighting factors with values (Fig. 1, label WEIGHT) to each of a plurality of carriers of a multi-carrier data (Fig. 1, labels $MU'_0 - MU'_{N-1}$). Although Peeters et al. does not disclose other calculations, Imamura discloses an OFDM communication device calculating the phase error compensation or carrier frequency offset and propagation distortion compensation circuit or channel estimate. (Fig. 3, labels 104 and 105) It would be obvious to one skilled in the art to combine Peeters et al and Imamura's invention to reduce phase variation between subcarriers so as to improve the quality of the received signal.

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- b. **Claim 6**, Imamura discloses a carrier frequency offset or phase offset used to calculate the phase compensation. (Fig. 3, label 104 and 105) It would be obvious to one skilled in the art to combine Peeters et al and Imamura's invention to reduce phase variation between subcarriers so as to improve the quality of the received signal.

Allowable Subject Matter


4. **Claims 2, 3, 4, 5** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
5. **Claims 7-30** are allowed over prior art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Linda Wong whose telephone number is 571-272-6044. The examiner can normally be reached on 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on (571) 272-3056. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LW


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